



**Statement for the Record of the  
U.S. House Committee on Ways and Means  
Working Group on Energy Tax Issues  
April 15, 2013**

**Introduction**

Thank you for the opportunity to provide a written statement to the U.S. House Committee on Ways and Means Working Group on Energy Tax Issues.

BIO is the world's largest biotechnology organization, with more than 1,100 members worldwide, including state and regional biotech associations, service providers to the industry and academic centers. BIO's Industrial and Environmental Section represents over 85 leading companies in the production of conventional and advanced biofuels, renewable chemicals and other sustainable solutions to energy and climate change. BIO member companies apply industrial biotechnologies to help resolve important challenges in synthesizing new products, whole cell systems and other biologic processes to improve the range of manufacturing and chemical processes. BIO members include the leaders in developing new crop technologies for food, feed, fiber, and fuel.

BIO commends the Working Group for delving into the important policy questions with regard to the appropriate role of the Internal Revenue Code in supporting clean energy incentives, and understanding how these incentives measure against key metrics such as cost, effectiveness, and job creation. History has demonstrated that tax incentives can be powerful policy mechanisms, particularly in the case of helping to achieve the nation's energy policy objectives by promoting the deployment and utilization of new energy resources.

Sustained supportive tax policy is very important to emerging technologies that have not yet achieved commercial scale, and should be targeted at those technologies with the greatest potential to create the jobs, economic growth, energy security and environmental benefits we seek as a nation. Emerging technologies in advanced biofuels, renewable chemicals, and biobased products have tremendous potential to address the nation's challenges and are ready for commercial deployment, but face a very challenging capital environment for first-of-a-kind biorefinery construction. We urge you to extend and enhance provisions that support the scale-up of these important technologies.



## **Background**

Advanced biofuels, renewable chemicals and biobased products have great potential to significantly increase this nation's energy security while creating thousands of solid, well-paying U.S. jobs. A supportive federal tax regime helped establish a domestic biofuels industry that is already creating jobs, helping to reduce our dependence on foreign oil and providing downward pressure on gas prices at the pump. It is now contributing more than 400,000 jobs and \$53 billion in new activity to the nation's economy. A recent report found that additional job creation from advanced biofuels production could reach 807,000 by 2022 and reduce U.S. petroleum imports by nearly \$70 billion each year by 2022.<sup>1</sup>

Renewable chemicals and biobased products offer similar opportunities. A recent report estimates that the global sustainable chemical industry will grow to \$1 trillion, which provides an important opportunity for U.S. job and export growth. Currently, the industry is estimated to be only seven percent of its future projected size. U.S. companies traditionally make-up about 19 percent of the traditional global chemical industry. If U.S. companies capture the same percentage of the sustainable chemical industry as it grows to \$1 trillion, BIO anticipates 237,000 direct U.S. jobs and a trade surplus within the chemical sector.<sup>2</sup>

To accelerate large scale commercialization of advanced biofuels, renewable chemicals and biobased products, below please find an overview of provisions we believe are necessary to drive continued investment in the broadest possible set of emerging technologies.

## **Biofuels**

### ***Tax Incentives Are More Important Now than Ever as Advanced Biofuels Move to the Cusp of Commercialization***

In the five years since cellulosic biofuel tax incentives were enacted as part of the 2008 Farm Bill, advanced biofuel developers have invested several billion dollars cumulatively in commercializing cellulosic biofuels from next generation feedstocks such as corn stalks, wood chips, and municipal waste<sup>3</sup>. Leading companies are right now building and commissioning the first large-scale commercial cellulosic biorefineries<sup>4</sup>. The first two of these facilities – INEOS Bio in Florida and KiOR in

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<sup>1</sup> U.S. Economic Impact of Advanced Biofuels Production: Perspectives to 2030, bio-era, Feb. 2009, available at: <http://www.ascension-publishing.com/BIZ/BIO-econ-impact.pdf>

<sup>2</sup> Biobased Chemicals and Products: A New Driver of U.S. Economic Development and Green Jobs, BIO, available at: [http://www.bio.org/sites/default/files/20100310\\_biobased\\_chemicals.pdf](http://www.bio.org/sites/default/files/20100310_biobased_chemicals.pdf)

<sup>3</sup> "Cellulosic Biofuels Industry Progress Report, 2012-2013." Washington, DC: Advanced Ethanol Council (AEC), 2012. [http://ethanolrfa.3cdn.net/d9d44cd750f32071c6\\_h2m6vaik3.pdf](http://ethanolrfa.3cdn.net/d9d44cd750f32071c6_h2m6vaik3.pdf)

<sup>4</sup> "The Renewable Fuel Standard: Timeline of a Successful Policy." Washington, DC: Biotechnology Industry Organization (BIO), June 29, 2012. <http://www.bio.org/articles/renewable-fuel-standard-timeline-successful-policy>.



Mississippi – are expected to deliver the nation’s first commercial volumes of cellulosic biofuels this year. Dozens more such facilities are in the planning and development stage<sup>5</sup>. Algae biofuel development has also accelerated recently, thanks in significant part to actions by Congress to extend cellulosic biofuel tax credits to algae-based fuels. Several leading algae biofuel developers have recently secured major investments in commercial projects.<sup>6</sup> Other advanced biofuels, such as biobutanol and renewable hydrocarbons, have also advanced rapidly towards commercialization, driven in significant part by the promise of preferred tax status.

With advanced biofuels on the cusp of commercialization, tax incentives are more important now than ever. Sustained tax credit policy can help level the playing field for new, innovative technologies competing with mature technologies in the marketplace. Advanced biofuel tax credits have been an important and effective tool in pulling these technologies to the brink of commercial deployment – at very little cost to the taxpayer. We must ensure that the momentum built in the initial phase of these incentives is carried to fruition. These first-of-a-kind biorefineries can provide the blueprints for rapidly scaling up production of fuels, energy and chemicals from renewable biomass. Once a strong first wave of these facilities is able to demonstrate the technology at commercial scale, private capital for a broad national deployment will follow.

Regrettably, nearly all federal tax incentives for advanced biofuels are temporary and scheduled to expire at the end of 2013. To ensure continued progress in development of these important renewable technologies, expiring advanced biofuel tax incentives must be extended for the maximum achievable period, or until Congress undertakes fundamental tax reform. At a minimum, this should include extension of the Second Generation Biofuels Production Tax Credit, Accelerated Depreciation for Second Generation Biofuels Plant Property, tax incentives for Renewable Diesel; and tax incentives for Alternative Fuel Mixtures.

### ***Role of Biofuels Tax Incentives in Fundamental Tax Reform***

BIO supports the premise of fundamental tax reform. The Internal Revenue Code has become complex; high corporate income tax rates frustrate U.S. companies competing overseas; and the conglomeration of various special deductions, depreciation rates, income tax credits for producers, excise tax credits for blenders, and other carveouts has never been comprehensively examined on their merits. In the energy space, there is a jumble of provisions that provide robust incentives to a few favored technologies, modest benefit to some, and no incentives at all to other valuable struggling noncommercial ventures.

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<sup>5</sup> “Existing and Planned Biorefineries.” Washington, DC: Biotechnology Industry Organization (BIO), Jan. 28, 2013.  
<https://maps.google.com/maps/ms?msid=217606209395764984062.0004573f4767c96126a4d&msa=0&ll=36.668419,-114.873047&spn=52.490662,108.28125>.

<sup>6</sup> See e.g. <http://www.bloomberg.com/news/2013-03-20/tesoro-is-first-customer-for-sapphire-s-algae-derived-crude-oil.html>



That being said, and remaining mindful that deficit pressures require that Members pay for reductions in the corporate income tax rate with corresponding reductions in the so-called "tax expenditures" which permeate the Code, BIO suggests that there are compelling reasons to reform, rather than terminate, the advanced biofuel incentives in the tax code. Review of a list of BIO members actively working to develop the first commercial advanced biofuel biorefineries reveals that most of these companies are currently generating losses, and thus would be ineligible to benefit from reductions in the corporate income tax rate for many years. While we expect many of them to eventually become profitable, this will occur only after they have obtained financing for, and constructed, one or more commercial scale facilities. For this reason, a tax reform which lowers corporate income tax rates without enacting targeted advanced biofuels tax incentives will not assist BIO's energy companies in making America energy-sufficient while also growing U.S. jobs.

As Members move forward with this examination of the tax code, it is important to note that virtually all of the tax provisions supporting advanced biofuels are temporary, expiring at the end of 2013. Consistent with testimony provided before both House and Senate tax writing committee hearings over recent years, this lack of long-term predictability associated with the incentives is one of the critical flaws in current law and makes them relatively feeble market drivers. Developers of advanced biofuel biorefineries, for instance, generally discover that the credits are slated to expire years before their prospective facility could be placed in service. For this reason, financiers are generally unwilling to count the value of the tax incentives when calculating the potential viability of planned facilities. Consequently, BIO believes that tax incentives enacted as part of a comprehensive tax reform package must be permanent, or at least extended for such a long time as to cover the period where the industry could reasonably be expected to place its first generation of biorefineries in service (e.g. 10 years).

In addition to predictability, BIO members stress that the Code must be rationalized to provide equal benefits to similarly situated technologies. A cursory examination of the current law both in the electricity and the fuels sectors will disclose numerous instances where one industry receives different tax credit rates, or different eligibility periods, or different tax credit incentive structures, for performing a similar or identical activity, with no overt public policy explanation for the dissimilarities. Since taxation drives behavior to a large degree in this space, BIO advocates in the context of fundamental tax reform that certain performance based indices for renewable energy be adopted, possibly involving imported energy displacement and/or pollution reduction relative to some scale, and use these standards to provide energy developers with a logical schedule of incentives.



***Until Congress Can Agree on Comprehensive Tax Reform, Incremental Reform of Advanced Biofuels Tax Incentives Could Provide Meaningful Benefits***

In the event comprehensive tax reform is not achieved in the near term, the following framework for incremental biofuels tax reform is offered:

- ***Reform the Second Generation Production Tax Credit:*** BIO's member companies are working hard to commercialize cellulosic and algal biofuel technologies and these companies are dependent on private investors to help fuel the innovation that will enable this commercialization effort. The cellulosic biofuels production tax credit and the accelerated depreciation for cellulosic biofuel property have the potential to unlock vital project financing. But because commercial biorefinery projects take an average of two or more years to complete, the December 31, 2013 expiration date prevents project developers from leveraging the value of these credits. Thus, even though the incentives are nominally effective through 2013, the credits have already effectively expired with regard to current facility development. Second Generation Biofuels PTC should be reformulated to mirror the mechanism of the Sec. 45 renewable electricity tax credit, i.e. allow each eligible facility to qualify for a 10-year period of tax credits without the need for annual extensions. Also, the "begin construction" rule from Sec. 45 should be applied to the new Second Generation Biofuels PTC, allowing developers to make a facility eligible to participate in the program by beginning construction or satisfying a reasonable safe harbor.
- ***Provide an Investment Tax Credit for Advanced Biofuels Facilities:*** Capital costs for construction of advanced biofuel biorefineries present a substantial barrier to commercialization. Congress should provide a one-time election to advanced biofuel facility developers for an investment tax credit to help accelerate construction of advanced biofuel biorefineries and speed deployment of emerging advanced biofuel technologies. Fuel produced by facilities built with federal ITC dollars would not be subsequently eligible for fuel production or blenders tax credits.

**Renewable Chemicals and Biobased Products**

Renewable chemicals and biobased products derived from renewable biomass represent a historic opportunity for revitalization of U.S. chemical manufacturing. The U.S has the potential to become the world leader in renewable chemicals and biobased product manufacturing, as we are currently home to most of the world's advanced renewable chemicals technology and intellectual property and have access to a wide range of sustainably produced renewable biomass. An investment in renewable chemicals will pay strong dividends in the future of U.S. chemical



manufacturing while advancing the goals of quality domestic job creation and domestic advanced manufacturing, improved trade balance, and maintaining U.S. leadership in clean energy and manufacturing technologies.

The shift to renewable biomass feedstocks from traditional fossil feedstocks increases energy efficiency, reduces costs and reduces reliance of foreign oil. Volatile crude oil prices create an unstable price structure for traditional fossil-based chemicals and resulting products. Renewable chemicals can be cost competitive now and maintain stable pricing, allowing businesses to plan for the long-term and pass savings to consumers. Renewable chemical processes can also prevent pollution before it ever occurs and remediate existing pollution, improving the health of the environment. For example, many renewable chemicals are carbon negative on a lifecycle basis, sequestering atmospheric carbon within the chemical/product itself. The World Wildlife Fund (WWF) recently concluded that these industrial biotechnologies have the potential to save up to 2.5 billion tons of carbon dioxide equivalent emissions per year by 2030.

U.S.-based companies are rapidly developing homegrown technologies for renewable chemical platforms, but face the dual challenge of well-established fossil incumbents and competition with other renewable technologies for scarce private capital. To realize the industry's potential for domestic job creation and reduced reliance on foreign oil, Congress must ensure that renewable chemical technologies are incentivized in the tax code, and at a minimum receive tax parity with other renewable energy technologies. Extending production and investment tax credits currently offered to other renewable to renewable chemicals would significantly accelerate technology development and commercialization, and ensure that these technologies are deployed here in the U.S.

### ***Extend Renewable Energy and Manufacturing Tax Opportunities to Renewable Chemicals and Biobased Products***

To realize the full potential of the domestic renewable chemicals industry, existing renewable energy and manufacturing tax incentive regimes should be opened to renewable chemicals:

- ***Fund Sec. 48C and Clarify Eligibility of Renewable Chemicals and Biobased Products for Sec. 48C Advanced Manufacturing Credit:***  
Legislation introduced in the last Congress, S. 1764, the *Make It in America Tax Credit Act of 2011*, was proposed to provide much needed additional funding to the Advanced Energy Manufacturing Tax Credit (Section 48C) and explicitly clarify the eligibility of renewable chemicals and biobased product projects. Incentivizing investment in biorefineries provides the potential to create new markets for American products and jobs. Renewable chemicals and biobased products impact everyday products such as car parts to cleaning products, soaps, insulation materials, plastics, foams, fibers, fabrics, and impacting our economy. BIO advocates that Congress incorporate the



language of the Make It in America Tax Credit Act of 2011 into any energy or manufacturing tax package.

- ***Provide a Tax Credit for Production of Qualifying Renewable Chemicals***: Renewable chemicals and biobased plastics represent an important technology platform for reducing reliance on petroleum, creating green U.S. jobs, increasing energy security, and reducing greenhouse gas emissions. By providing a federal income tax credit for domestically produced renewable chemicals, Congress can create domestic jobs and other economic activity, and can help secure America's leadership in the important arena of green chemistry. Like current law renewable electricity production credits, the credits would be general business credits available for a limited period per facility. To truly achieve energy security, the U.S. must develop biorefineries that produce alternatives to all of the products made from each barrel of oil. Industrial biotechnology enables the production of renewable chemicals and biobased products from biomass, and the total displacement of fossil fuel products can be accelerated with a production tax credit. The *Qualifying Renewable Chemical Production Tax Credit Act of 2012*, H.R. 4953, and Senate companion, S. 3491, offers a strong model for implementation of this proposal.

## **Conclusion**

BIO supports the efforts underway to update, level-set and innovate the U.S. tax code, particularly as it applies to innovation sectors such as advanced biofuels, renewable chemicals and biobased products. The provisions above are essential ingredients in any effort to accelerate the commercialization of advanced biofuels, renewable chemicals and biobased products. We ask that you include these provisions in any energy or manufacturing tax package.

Thank you.